ABSTRACT OF THE DISCLOSURE

Systems and methods implement queues that perform write operations in a re-circulating sequential manner. The nature of the queue systems of the present invention allow writes to the queue to occur independently of read operations therefrom. A current event counter is updated by the queue logic to keep track of a count value that corresponds to the total number of data events written to the queue. Preferably, the current event counter is capable of counting an amount greater than the total number of addressable storage locations of the queue. A write pointer may be derived from the count value stored in the event counter from which a select addressable storage location of the queue can be determined for queuing each new data event. Read operations from the queue may be performed according to any prescribed manner, including random access thereto. Moreover, read operations can be performed in a first manner when no overflow is detected, and in a second manner in response to overflow.